

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

Please amend the third full paragraph on page 3, (lines 18-24), as follows:

However, although a map need not be divided into unit maps, and entire map data incorporating a certain route may be transmitted to a mobile terminal which is capable of carrying out route searching, the mobile terminal must be equipped with a storage (memory) device with a large capacity for storing essential data such as map data and time tables of traffic transportation facilities, which would entail additional cost in the production of the mobile terminal.

Please amend the third paragraph on page 14, (lines 7-16), as follows:

(B14) route turn angle determining means (SC5A) which determines for a specific guide candidate point (X_i) whether a route turn angle $[(\alpha_i)]$ formed by a road (RA to RC) between a starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (R_x) and the specific guide point candidate (X_i), and a road (RA to RC) between a destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (R_x) and the specific guide point candidate (X_i) is equal to or less than a predetermined angle $[(\alpha_a)]$; and

Please amend the fourth paragraph on page 14, (lines 17-20), as follows:

(B15) the guide point setting means (SC5) which sets the specific guide point candidate (Xi) to as guide point (X5, X8) if the route turn angle $[(\alpha_i)]$ is equal to or less than the predetermined angle $[(\alpha_a)]$.

Function of the Sixth Mode of the First Embodiment

Please amend the first paragraph on page 15, (lines 4-20), as follows:

The route turn angle determining means (SC5A) of the server (7) determines for a specific guide point candidate (Xi) whether the route turn angle $[(\alpha_i)]$ formed by the road (RA to RC) between the starting location side guide point candidate (Xi-1) situated on the starting location (X1) side of the specific guide point candidate (Xi) along the route (RX) and the specific guide point candidate (Xi), and the road (RA to RC) between the destination location side guide point candidate (Xi+1) situated on the destination location (X10) side of the specific guide point candidate (Xi) along the route (RX) and the specific guide point candidate (Xi) is equal to or less than the predetermined $[\text{angle}(\alpha_a)]$ angle (α_a) . Then, if the route turn angle $[(\alpha_i)]$ is equal to or less than the predetermined $[\text{angle}(\alpha_a)]$ angle (α_a) , the guide point setting means (SC5) sets the specific guide point candidate (Xi) as the guide point (X5, X8). Therefore, in the route guidance system (S) of the sixth mode of the first embodiment, the guide points (X5, X8) are set based on the route turn angle $[(\alpha_i)]$. In particular, if the route (RX) has an angle equal to or less than the predetermined angle $[(\alpha_a)]$ due to an intersection or the like, the user can be notified of guide information.

Please amend the paragraph bridging pages 25 and 26, as follows:

(B14) route turn angle determining means (SC5A) which determines for a specific guide candidate point (X_i) whether a route turn angle $[[(\cdot, i)]]$ (α_i) formed by a road (RA to RC) between the starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (R_x) and the specific guide point candidate (X_i), and a road (RA to RC) between the destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (R_x) and the specific guide point candidate (X_i) is equal to or less than a predetermined angle $[[(\cdot, a)]]$ (α_a); and

Please amend the first paragraph on page 26, (lines 9-11), as follows:

(B15) the guide point setting means (SC5) which sets the specific guide point candidate (X_i) as the guide point (X_5 , X_8) if the route turn angle $[[(\cdot, i)]]$ (α_i) is equal to or less than the predetermined angle $[[(\cdot, a)]]$ (α_a).

Please amend the paragraph bridging pages 26 and 27, as follows:

The route turn angle determining means (SC5A) determines for the specific guide point candidate (X_i) whether the route turn angle $[[(\cdot, i)]]$ (α_i) formed by the road (RA to RC) between the starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (R_X) and the specific guide point candidate (X_i), and the road (RA to RC) between the destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (R_X) and the specific guide point candidate (X_i) is equal to or less

than the predetermined $[\angle(.,a)]$ angle (αa). Then, if the route turn angle $[\angle(.,i)]$ (αi) is equal to or less than the predetermined $[\angle(.,a)]$ angle (αa), the guide point setting means (SC5) sets the specific guide point candidate (X_i) as the guide points (X_5 , X_8). Therefore, in the server (7) according to the third mode of the third embodiment, the guide points (X_5 , X_8) are set based on the route turn angle $[\angle(.,i)]$ (αi). In particular, if the route (RX) has an angle equal to or less than the predetermined angle $[\angle(.,a)]$ (αa) due to an intersection or the like, the user can be notified of guide information.

Please amend the third paragraph on page 37, (lines 8-16), as follows:

route turn angle determining means (SC5A) which determines for a specific guide candidate point (X_i) whether a route turn angle $[\angle(.,i)]$ (αi) formed by a road (RA to RC) between a starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (Rx) and the specific guide point candidate (X_i), and a road(RA to RC) between a destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (Rx) and the specific guide point candidate (X_i) is equal to or less than a predetermined angle $[\angle(.,a)]$ (αa); and

Please amend the fourth paragraph on page 37, (lines 17-19), as follows:

the guide point setting means (SC5) which sets the specific guide point candidate (X_i) as the guide points (X_5 , X_8) if the route turn angle $[\angle(.,i)]$ (αi) is equal to or less than the predetermined angle $[\angle(.,a)]$ (αa).

Please amend the paragraph bridging pages 38 and 39, as follows:

route turn angle determining means (SC5A) which determines for a specific guide point candidate (X_i) whether a route turn angle $[(\alpha_i)]$ formed by a road (RA to RC) between a starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (RX) and the specific guide point candidate (X_i), and a road (RA to RC) between a destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (RX) and the specific guide point candidate (X_i) is equal to or less than a predetermined angle $[(\alpha_a)]$; and

Please amend the first full paragraph on page 39, (lines 2-4), as follows:

the guide point setting means (SC5) which sets the specific guide point candidate (X_i) to the guide points (X_5 , X_8) if the route turn angle $[(\alpha_i)]$ is equal to or less than the predetermined angle $[(\alpha_a)]$.

Please amend the paragraph bridging pages 39 and 40, as follows:

The route turn angle determining means (SC5A) determines for a specific guide point candidate (X_i) whether the route turn angle $[(\alpha_i)]$ formed by the road (RA to RC) between the starting location side guide point candidate (X_{i-1}) situated on the starting location (X_1) side of the specific guide point candidate (X_i) along the route (RX) and the specific guide point candidate (X_i), and the road (RA to RC) between the destination location side guide point candidate (X_{i+1}) situated on the destination location (X_{10}) side of the specific guide point candidate (X_i) along the route (RX) and the specific guide point candidate (X_i) is equal to or less

than the predetermined $[\angle(.,a)]$ angle (aa). Then, if the route turn angle $[(.,i)]$ (ai) is equal to or less than the predetermined $[\angle(.,a)]$ angle (aa), the guide point setting means (SC5) sets the specific guide point candidate (Xi) as the guide points (X5, X8). Therefore, in the program of the server (7) according to the third mode of the fifth embodiment, the guide points (X5, X8) are set based on the route turn angle $[(.,i)]$ (ai). In particular, if the route (RX) has an angle equal to or less than the predetermined angle $[(.,a)]$ (aa) due to an intersection or the like, the user can be notified of guide information.

Please amend the paragraph bridging pages 46 and 47, as follows:

The searching condition entry image display means KC2A displays an image (searching condition entry image, refer to FIG. 3) used for entering route searching conditions such as a starting location and a destination location on the information display screen which displays the image. As shown in Fig. 3, the searching condition entry image of the first embodiment shows a starting location entry field used to enter a starting location, a destination location entry field used to enter a destination location, a date and time entry field used to enter the time and date of departure or arrival of the route guidance, a searching number entry field used to enter the number of routes to be searched for, a ~~traffic~~ transportation means entry field used to enter the particular ~~traffic~~ transportation means used for the route guidance, and a searching condition transmitting icon used to transmit the searching conditions to the server 7.

Please amend the paragraph bridging pages 56 and 57, as follows:

The route producing means SC3 determines the route from the starting location to the destination location according to the route searching conditions received, and produces the route

data consisting of starting location data which indicates the position of the starting location, destination location data which indicates the position of the destination location, and position data pertaining to guide points which are set in the course of the route and at which the user is notified of guide information. For example, the route producing means SC3 according to the first embodiment determines the route (RX) which includes the starting location X1 (a starting location outside the unit map M) on one end, the destination location X10 on the other end, and is formed by connecting multiple lines and curves successively as shown in Fig. 7. Route data of the route RX is thereby produced (data indicating the route is vector data) including the starting location X1, guide points X5 and X8, and the destination location X10. It should be noted that the route producing means SC3 according to the first embodiment produces the optimal route RX from the starting location to the destination location along the roads RA to RC similar to the technology described in Patent Document 1. Moreover, the guide points X5 and X8 are set by guide point setting means SC5 described later. Further, if the user specifies that ~~traffic~~ transportation facilities are to be used as route searching conditions, an optimal route including ~~traffic~~ transportation facilities is produced. If the number of routes to be searched is specified, multiple routes are produced corresponding to the specified number.

Please amend the paragraph bridging pages 57 and 58, as follows:

The guide point setting means SC5 includes route turn angle determining means SC5A and road type change determining means SC5B, and sets the guide points X5 and X8 from the guide point candidate points X2 to X9 according to predetermined conditions. The guide point setting means SC5 according to the first embodiment sets a guide candidate point as a guide

point if the route turn angle (described later) is equal to or less than a predetermined angle, or the road types of the roads RA to RC are different. For example, in Fig. 7, for the specific guide candidate point X5, if the route turn angle α_i ($0 \leq \alpha_i \leq 180^\circ$) formed by the road RB between the starting location side guide candidate point X4 situated on the starting location X1 side of the specific guide candidate point X5 along the route RX and the specific guide candidate point X5, and the road RA between the destination location side guide candidate point X6 situated on the destination location X10 side of the specific guide candidate point X5 along the route RX and the specific guide candidate point X5 is equal to or less than a predetermined angle $[(,a)] \alpha_a$ ($[(,a)=120^\circ] \alpha_a=120^\circ$, for example), the specific guide candidate point X5 is set as a guide point. Moreover, if the road RB on the starting location X1 side of the specific guide candidate point X5 and the road RA on the destination location X10 side of the specific guide candidate point X5 are of different types, the specific guide candidate point X5 is set as a guide point. Further, the guide point setting means SC5 according the first embodiment sets the turning directions at the guide points X5 and X8 (such as “right” at X5, “left” at X8, and “diagonally right”) based on the route turn angle $[(,i)] \alpha_i$.

Please amend the paragraph bridging pages 58 and 59, as follows:

SC5A: Route Turn Angle Determining Means

The route turn angle determining means SC5A determines for a specific guide candidate point X_i ($i=1$ to g , where “ g ” represents a natural number as the value for the destination location) whether the route turn angle $[(,i)] \alpha_i$ formed by the road between the starting location side guide candidate point X_{i-1} situated on the starting location (X1) side of the specific guide

candidate point X_i along the route RX and the specific guide candidate point X_i , and the road between a destination location side guide candidate point X_{i+1} situated on the destination location X_g side of the specific guide candidate point X_i along the route RX and the specific guide candidate point X_i , is equal to or less than the predetermined angle $[\alpha]$ α .

Please amend the fourth full paragraph on page 61, (lines 11-17), as follows:

In step ST7, the program calculates the angle formed by a vector between the guide candidate point X_{i-1} on the starting location side of the guide candidate point X_i and X_i , and a vector between the guide candidate point X_{i+1} on the destination location side and X_i . Namely, the route turn angle $[\alpha_i]$ α_i , which is the angle formed by the road between the guide point candidates X_{i-1} and X_i and the road between the guide point candidates X_{i+1} and X_i , is calculated. The program then proceeds to step ST8.

Please amend the fifth full paragraph on page 61, (lines 18-20), as follows:

In step ST8, the program determines whether the route turn angle $[\alpha_i]$ α_i is equal to or less than the predetermined angle $[\alpha]$ α . The program proceeds to step ST9 if “NO” (N), and proceeds to step ST10 if “YES” (Y).

Please amend the fifth full paragraph on page 79, (lines 13-16), as follows:

Further, under the route guidance system S of the first embodiment, a guide point as well as the direction in which to turn is determined according to the route turn angle $[\alpha_i]$ α_i , which information can be transmitted to the mobile phone 1.

Please amend the fifth full paragraph on page 80, (lines 7-13), as follows:

For example, although a guide point is established based on the route turn angle $[\theta_i]$ θ_i as disclosed in the first embodiment, alternatively, a guide candidate point may be set as a guide point if the direction of the road on the starting location side of the guide candidate point (stored in advance) is different from the direction of the road on the destination location side (stored in advance) in terms of two-direction intervals or more in sixteen directions.

Please amend the paragraph bridging pages 80 and 81, as follows:

Further, even though the guide point candidates X1 to X10 are established based on the connection points NA1 to NC7 set in advance according to the first embodiment, after the route RX has been established, guide point candidates Xi may be set along the route at intervals of 10m, and guide points may thereafter be determined based on the turn angle $[\theta_i]$ θ_i or the like.